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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.             | CONFIRMATION NO.            |
|--|-------------|----------------------|---------------------------------|-----------------------------|
| 10/667,671   | 09/23/2003  | Hiroshi Takei        | 242831US0                       | 9100                        |
| 22850 7590 05/14/2007<br>OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.<br>1940 DUKE STREET<br>ALEXANDRIA, VA 22314 |             |                      | EXAMINER<br>ZIMMER, MARC S      |                             |
|  |             |                      | ART UNIT<br>1712                | PAPER NUMBER                |
|  |             |                      | NOTIFICATION DATE<br>05/14/2007 | DELIVERY MODE<br>ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/667,671 | <b>Applicant(s)</b><br>TAKEI ET AL. |  |
|                              | <b>Examiner</b><br>Marc S. Zimmer    | <b>Art Unit</b><br>1712             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 13-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Applicant is advised that claims 9-11 had been cancelled in the Examiner's amendment of March 24, 2006 prior to Applicant's request for continued examination. Therefore, these claims are no longer active in the case and any reply to this Office action should reflect their cancelled status. Applicant is further advised that, should they introduce new claims depending from claim 1 that mirror the subject matter of original claims 9-11, they will be subject to a rejection under 35 U.S.C. 112, 1<sup>st</sup> paragraph. Since it is already stipulated in claim 1 that the silicone rubber component contains a peroxide, it can only be assumed that claims 9-11 are directed to a dual-curable silicone rubber component wherein both a peroxide and organohydrogensiloxane/platinum catalyst are incorporated. The Specification seems to mention these different curatives only in the alternative hence these claims are not enabled by the original disclosure.

Applicant traverses the Examiner's rejection of claims 1-8 and 13-19 over JP 2001-018330 on the grounds that the reference does not teach an intermediate synthetic resin film having heat resistance to which is laminated on both of its major surfaces a silicone rubber layer but, instead, a silicone rubber layer to which is laminated a synthetic resin on each of its two major surfaces. The Examiner has carefully re-read this document and agrees that it does indeed teach the latter of these two configurations hence the rejection is hereby withdrawn.

However, upon reviewing the prosecution history, the Examiner concluded that his earlier indication that the claims were allowable over Japanese patent number 52-102678 had been erroneous at least because the embodiments of the central plastic film in that reference, polyethylene terephthalate and polyimide, are themselves heat-resistant and, therefore, would not be degraded under the conditions in which peroxide curing of an adjacent silicone rubber layer had taken place.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-8, and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okami et al., U.S. patent # 6,074,963. See the discussion of the relevance of this document in the November 9, 2005 correspondence.

It apparently was missed before that Okami et al. state that the silicone rubber component may be peroxide-curable (column 2, lines 63-65). Though this does not perhaps represent the most preferred embodiment of their invention, "Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments." *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments.

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*Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989). In those instances where the rubber is cured using a peroxide, the skilled artisan will appreciate that alkenyl-functional polymers adhering to the description in the paragraph bridging columns 4 and 5 may be used wherein the peroxide replaces the combination of an organohydrogensiloxane and hydrosilylation catalyst. The limitation of claim 13 is un inventive insofar as the optimal quantities of peroxide are determined routinely.

Concerning claim 15, the reference is silent as to the particle diameter of the conductive filler. Nevertheless, it is known that particle diameter and surface area are inversely related and, thus, the smaller the particle size, the more surface area contributed by the entire filler sample and, therefore, the better the conductivity.

As for claims 17-19, the reference is silent as to what adhesion promoters are appropriate to ensure that a robust bonding interaction between the rubber and polyester mesh is created. Where the prior art fails to disclose those materials which are suitable in a specified capacity, one of ordinary skill would consult the related prior art to ascertain what compounds are useful in the capacity of adhesion promoters for silicone rubbers. The Examiner takes notice of the fact that the adhesion promoters described in claim 19 were well known as of the time of the invention and, in fact, are disclosed in numerous other patents assigned to the same assignee as is the present application.

Claims 1-6 and 13-16 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 52-102678.

This document provides an extremely general disclosure of a composite sheet comprising an insulating plastic film that, according to the description is either polyethylene terephthalate or a polyimide, on which is coated a heat-conductive silicone rubber layer on one or both sides of the plastic film. There is no mention of the mechanism by which the rubber is cured hence the skilled artisan would presume that any rubber that cures by a mechanism not deleterious to the properties of the plastic film would be suitable. Because silicone rubbers are, by themselves, not thermally-conductive, it is reasonable to expect that a conductive additive is incorporated and, further, that the conductive additive is an inorganic filler. Indeed, the Examiner does not recall ever encountering a polymer composition rendered thermally conductive by the incorporation of an additive where the additive was not an inorganic filler.

The layer thickness of each of the layers is not disclosed but Applicant has not attached criticality to the ranges recited in claims 2 nor 5. The skilled artisan is capable of optimizing this parameter as a matter of routine experimentation while accounting for the particular application of the composite film.

The particle size and amounts of the conductive filler are, likewise, parameters that are routinely optimized by the skilled artisan. As before, it is widely recognized that a smaller particle has associated with it a larger surface area that would be more efficient for heat transfer.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 52-102678 in view of Okami et al., U.S. Patent # 6,074,963. Again, JP 52-102678 is rather non-descriptive of most aspects of the laminate described therein. The skilled

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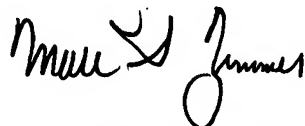
artisan would consult the most closely-related prior art, Okami et al. in this instance, to ascertain what compounds are suitable to fulfill the role of the silicone rubber.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

May 8, 2007

A handwritten signature in black ink, appearing to read "Marc S. Zimmer".

MARC S. ZIMMER  
PRIMARY EXAMINER